



## **IMPROVED TRANSFER MOLDING OF INTEGRATED CIRCUIT PACKAGES**

### **ABSTRACT**

5           A method, mold and apparatus for encapsulating and underfilling an integrated  
circuit chip assembly. The mold has a first portion and a second portion with the first  
portion having first and second cavities and at least one channel interconnecting said first  
and second cavities. The first cavity is adapted to enclose said integrated circuit chip on  
said substrate. A clamping force is applied to the first and second portions of the mold to  
10       clamp the substrate between them with the integrated circuit chip located in the first  
cavity. Vents exhaust air from the first cavity. Encapsulant is injected into the first  
cavity of the first portion at a location in the first portion remote from the point of  
connection of the channel such that encapsulant flows around and underneath the  
integrated circuit chip and through the channel into the second cavity to thereby underfill  
15       and encapsulate the integrated circuit assembly.